UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,988	03/22/2000	David Barach	2386.2001-000	8379

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EXAMINER
RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _22 March 2000_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-40_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-40_ is/are rejected.

7) ☒ Claim(s) _19, 23 and 36_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _22 March 2000_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

  If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a) ☐ All b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

  a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: ref. 610. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: ref. 230, ref. 332, and ref. 334. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3.   The disclosure is objected to because of the following informalities: on page 3, lines 11-12 "typically managed equipped with" should be "typically managed by" or "typically equipped with."

Appropriate correction is required.

Claim Objections

4.   Claim 19 is objected to because of the following informalities: "means for automatically providing statistical data to said means for gathering statistical data in a controlled manner in a buffer" would be better worded as "means for automatically providing statistical data, in a controlled manner, to a buffer located in the means for gathering statistical data." Appropriate correction is required.

5.   Claims 23 and 36 are objected to because of the following informalities: "statistical data about a port at about the rate of being requested by the system controller" would be better worded as "statistical data pertaining to a port at about the rate requested by the system controller." Appropriate correction is required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7.   Claims 10-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 10 contain the limitations "automatically providing statistical data to a system controller in a controlled manner; and reporting the statistical data to the system controller when polled." Although the specification seems to support such language (page 6, lines 23-27), Examiner fails to see why the system controller polls the device when the data is already automatically provided to the controller. In addition, other claims have the automatic providing referring to the gathering of the statistical data to be stored in a buffer in the element rather than the reporting of the data to the controller. Because of this discrepancy between the claims and the specification, claim 10 is deemed to be not enabling. For the purposes of prior art rejections, claim 10 will be interpreted to read "automatically providing statistical data to a buffer in the device in a controlled manner; and reporting the statistical data to the system controller when polled."

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.   Claims 10-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10.   Claim 10 recites the limitation "the automatic buffering" in line 9. There is insufficient antecedent basis for this limitation in the claim. For the purposes of prior art rejections, "the automatic buffering" will be interpreted as "the automatic providing."

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12.   Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's disclosed prior art (referred to herein as Applicant) in view of Tanaka et al (USPN 5,548,725) in further view of Naimpally et al (USPN 5,650,825).

13.   Regarding claims 1, 10, 19, 20, 26, 32, and 33, Applicant discloses gathering statistical data from at least one element (line card) in a multiprocessor system employing a half-duplex bus by a system controller (page 3, line 11-page 4, line 20) where the element contains at least one communication port having high-speed communication capabilities with external devices (page 3, line 11-page 6, line 6); providing, by a processor, the statistical data, in a controlled manner, to a buffer connected to the element (page 5, lines 23-25) where a buffer is a well

known type of memory; and reporting the statistical data to the system controller when polled for

the statistical data and the statistical data is selected to be reported (page 5, line 9-page 6, line 6).

Applicant possibly does not expressly disclose as prior art automatically providing statistical data

to a buffer in the element in a controlled manner where automatically providing the data is taken

to mean providing the data without first being polled; however, automating a process is very old

and well known in the art, and it can be done for a variety of reasons. For instance, Tanaka

teaches, in a system for transmitting commands from master devices to slave devices, having a

slave device automatically transmit a status report to a master in order to decrease the number of

packets transmitted between the devices and thus the time needed by the element to obtain the

statistical data (col. 1, lines 28-54 and col. 2, lines 52-56). It would have been obvious to one of

ordinary skill in the art at the time of the invention to automatically provide statistical data to a

buffer in the element in a controlled manner in order to decrease the number of packets

transmitted between the devices and thus the time needed by the element to obtain the statistical

data. Applicant in view of Tanaka possibly does not disclose reporting the statistical data or a

subset of the statistical data to the system controller when polled for some other reason; the

subsequent reporting reducing the number of communications and data transfer cycles required

to transfer the statistical data from the element to the system controller resulting in a reduction of

bandwidth consumed by gathering the statistical data about the elements via the half-duplex

communication bus. Instead, Applicant in view of Tanaka discloses that statistical data is only

provided in response to a poll for statistical data and that null messages are transmitted to the

system controller when polled for some other reason (Applicant: page 5, line 9-page 6, line 6).

Naimpally discloses, in a data transmission system, transmitting substantive data in place of null

messages in order to take advantage of the "wasted resources of a NULL packet" (col. 2, line 57-col. 3, line 43 and col. 4, line 66-col. 5, line 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to transmit statistical data to the system controller when polled for some other reason in order to take advantage of the wasted resources of the NULL packet that is typically transmitted in response to a poll for some other reason. It would also have been obvious to one of ordinary skill in the art at the time of the invention that by transmitting statistical data to the system controller in place of the null message transmitted in response to a poll for some other reason that system bandwidth consumed by gathering statistical data would be reduced. Finally it would have been obvious to one of ordinary skill in the art at the time of the invention to use a computer program to implement a method since computer programs are more flexible than hardware.

14.   Regarding claims 2, 11, 21, 27, and 34, referring to claims 1, 10, 20, 26, and 33, Applicant in view of Tanaka in further view of Naimpally discloses that the statistical data is reported whenever the element has been polled for the statistical data or for some other reason (Applicant: page 3, line 11-page 4, line 20 and page 5, line 9-page 6, line 6 and Naimpally: col. 2, line 57-col. 3, line 43 and col. 4, line 66-col. 5, line 5). Applicant in view of Tanaka in further view of Naimpally possibly does not expressly disclose that the data is organized into a queue or that the reported statistical data is the statistical data that has reached the head of the queue; however, organizing the data into a queue and reporting the statistical data that has reached the head of the queue would have been obvious to one of ordinary skill in the art. Queues are well known in the art as a means for organizing data that is waiting to be acted upon. Additionally, it is obvious that if all of the statistical data buffered in the device cannot be sent in a single

message that the subsequent transmission of statistical data should start the transmission at the

point it previously left off. In this manner, the device would ensure that it does not send the same

information twice, needlessly wasting bandwidth, and that all the data is eventually sent. Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

organize the data into a queue and to report the statistical data that has reached the head of the

queue in order to ensure that the same statistical data is not transmitted twice and that all

statistical data is eventually transmitted.

15.   Regarding claims 3 and 12, referring to claims 1 and 10, Applicant in view of Tanaka in

further view of Naimpally discloses that the element is a line card having at least one processor

monitoring at least one communication port in the line card (Applicant: page 3, line 11-page 4,

line 20).

16.   Regarding claims 4 and 13, referring to claims 1 and 10, Applicant in view of Tanaka in

further view of Naimpally discloses that the system reports the gathered statistical data to a

central statistical data gathering system (Applicant: page 3, line 11-page 4, line 20).

17.   Regarding claims 5, 14, 22, 28, and 35, referring to claims 1, 10, 20, 26, and 33,

Applicant in view of Tanaka in further view of Naimpally discloses that the statistical data

includes information about an element communication port (Applicant: page 3, line 11-page 4,

line 20). Applicant in view of Tanaka in further view of Naimpally possibly does not expressly

disclose that the buffer stores only one instance of information about a communication port at

any given time; however, Applicant in view of Tanaka in further view of Naimpally does

disclose storing at least an instance of information about a communication port at any given time.

It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or

optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been obvious to store a single instance because it would have been obvious to store any number of instances absent a showing of criticality by the Applicant. In addition, because buffers have a finite capacity, it would have been obvious to one of ordinary skill in the art at the time of the invention to store only a single instance of information about a communication port at any given time in order to minimize the size of the buffer required for the device.

18.   Regarding claims 6, 15, 23, 29, and 36, referring to claims 1, 10, 20, 26, and 33, Applicant in view of Tanaka in further view of Naimpally discloses that the element makes statistical data regarding respective ports available at least as often as the system controller requires the statistical data (Applicant: page 3, line 11-page 4, line 20 and page 5, line 9-page 6, line 6 and Naimpally: col. 2, line 57-col. 3, line 43 and col. 4, line 66-col. 5, line 5).

19.   Regarding claims 7 and 16, referring to claims 1 and 10, Applicant in view of Tanaka in further view of Naimpally discloses that the element makes the statistical data available at least one time per second (Applicant: page 3, line 11-page 4, line 20).

20.   Regarding claims 8, 17, 24, 30, and 37, referring to claims 1, 10, 20, 26, and 33, Applicant in view of Tanaka in further view of Naimpally possibly does not expressly disclose

that the element makes the statistical data available as often as necessary but not so often that the

buffer is congested by the statistical data. However, making the statistical data available as often

as necessary but not so often that the buffer is congested by the statistical data would have been

obvious to one of ordinary skill in the art at the time of the invention in order to ensure that the

buffer is able to properly accommodate all information without data loss due to buffer overrun

(buffer congestion).

21.   Regarding claims 9, 18, 25, 31, and 38, referring to claims 1, 10, 20, 26, and 33,

Applicant in view of Tanaka in further view of Naimpally discloses that the element reports

statistical data in place of reporting a null response (Naimpally: col. 3, lines 27-43 and col. 4,

line 66-col. 5, line 5).

22.   Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Applicant's disclosed prior art (referred to herein as Applicant) in view of Naimpally et al

(USPN 5,650,825).

23.   Regarding claim 39 and 40, Applicant discloses a system controller gathering data on a

communication bus (page 3, line 11-page 4, line 20); at least one element in the system also on

the communication bus (page 3, line 11-page 4, line 20), said element: (i) providing the data to a

buffer (page 5, lines 23-25) where a buffer is a well known type of memory; and (ii) reporting a

subset of the data in the buffer to the system controller when polled for the data. Applicant

possibly does not disclose reporting a subset of the statistical data to the system controller when

polled for some other reason. Instead, Applicant in view of Tanaka discloses that statistical data

is only provided in response to a poll for statistical data and that null messages are transmitted to

the system controller when polled for some other reason (Applicant: page 5, line 9-page 6, line

6). Naimpally discloses, in a data transmission system, transmitting substantive data in place of null messages in order to take advantage of the "wasted resources of a NULL packet" (col. 2, line 57-col. 3, line 43 and col. 4, line 66-col. 5, line 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to transmit statistical data to the system controller when polled for some other reason in order to take advantage of the wasted resources of the NULL packet that is typically transmitted in response to a poll for some other reason.

Conclusion

24.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abbas (USPN 5,544,172) see col. 1, lines 7-63 which disclose transmitting information in unused parts of a message. Lindgren et al (USPN 6,157,656) see col. 2, lines 19-67 which disclose dynamically adjusting bandwidth allotted to control and data slots.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6743 for regular communications and (703)308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.
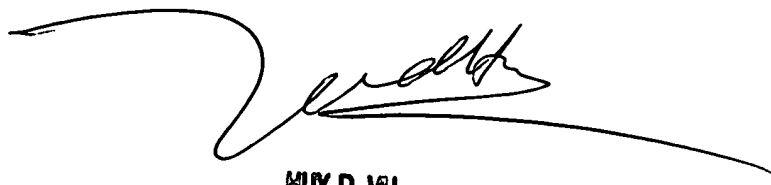
Daniel J. Ryman
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DJR

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May 6, 2003

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